Importation of

Shoots of Asparagus (*Asparagus officinalis*)

from Honduras into the United States

A Qualitative, Pathway-Initiated Pest Risk Assessment

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A. Introduction

The Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA) prepared this pest risk assessment to examine plant pest risks associated with the importation into the United States of **fresh asparagus *(Asparagus officinalis)* shoots grown in Honduras**. Currently this commodity is approved to enter the US; however, we are reviewing the entry status of many commodities in accordance with international guidelines. This is a qualitative pest risk assessment in which estimates of risk are expressed in qualitative terms such as high or low rather than in numerical terms such as probabilities or frequencies. Details of our methodology and rating criteria can be found in: *Pathway-Initiated Pest Risk Assessment: Guidelines for Qualitative Assessments, version 4.0* (USDA, 1995a), available from the individuals named on the front of this pest risk assessment, or on our web site at www.aphis.usda.gov/ppq/bats/bant.

International plant protection organizations such as the North American Plant Protection Organization (NAPPO) and the International Plant Protection Convention (IPPC) of the United Nations Food and Agriculture Organization (FAO) provide guidance for conducting pest risk analyses. The methods we used to initiate, conduct, and report this pest risk assessment are consistent with guidelines provided by NAPPO, IPPC and FAO. Our use of biological and phytosanitary terms such as "introduction" and "quarantine pest" conforms with the *NAPPO Compendium of Phytosanitary Terms* (Hopper, 1996) and the *Definitions and Abbreviations* (Introduction Section) in *International Standards for Phytosanitary Measures, Section 1—Import Regulations: Guidelines for Pest Risk Analysis* (FAO 1996).

B. Risk Assessment

1. Initiating Event: Proposed Action

This pest risk assessment is commodity-based, and therefore "pathway-initiated." The importation into the United States of **fresh asparagus *(Asparagus officinalis)* shoots grown in Honduras** is a potential pathway for introduction of plant pests. 7 CFR §319.56 provides regulatory authority for the importation of fruits and vegetables from foreign sources into the United States.

2. Assessment of Weediness Potential

The results of the weediness screening for *Asparagus officinalis* (Table 1) did not prompt a pest-initiated risk assessment.

Table 1:	**Process for Determining Weediness Potential of Commodity**
Commodity:	***Asparagus officinalis*** L. (Liliaceae)
Phase 1:	***Asparagus officinalis*** L. (asparagus, garden asparagus) is native to Europe, Asia, and North Africa and is widely cultivated in the United States.
Phase 2:	Is the species listed in:
	YES* ***Geographical Atlas of World Weeds*** (Holm *et al.*, 1979)
	NO *World's Worst Weeds* (Holm *et al.*, 1977)
	NO *Report of the Technical Committee to Evaluate Noxious Weeds; Exotic Weeds for Federal Noxious Weed Act* (Gunn and Ritchie, 1982)
	NO *Economically Important Foreign Weeds* (Reed, 1977)
	NO Weed Science Society of America list (WSSA, 1989)
	NO Is there any literature reference indicating weediness (*e.g.*, *AGRICOLA*, *CAB*, *Biological Abstracts*, *GRIS*; search on "species name" combined with "weed").
Phase 3:	**Conclusion:** Proceed with the pest risk assessment.
*The *Geographical Atlas of World Weeds* includes *Asparagus officinalis* L. as a common weed in Yugoslavia and a weed of unknown importance in New Zealand.	

3. Previous Risk Assessments, Current Status and Pest Interceptions

Decision History for *Asparagus* spp.

1951 - Asparagus was approved entry from all countries of the Western Hemisphere through all ports.

1990 - Asparagus was approved entry from Nicaragua through all ports.

Interceptions from Area for FY 1985-97

No pests have been intercepted on *Asparagus* spp. from Honduras during FY85-97 (USDA 1998).

4. Pest List: Pests Associated with *Asparagus* spp. In Honduras

The pest list in Table 2 was developed after a review of some of the information sources listed in USDA (1995). The list summarizes information on the distribution of each pest, pest-commodity association, and regulatory history.

Table 2. Pests of *Asparagus* spp. in Honduras

Pest	Distribution[1]	Comments[2]	References
Arthropods			
Agrotis ipsilon (Hufnagel) Lepidoptera: Noctuidae	HN, US	c, m, o	CPC, 1997
Ceratitis capitata (Wiedemann) Diptera: Tephritidae	HN	a, b[3], g	White and Elson-Harris, 1992; FAO Database, 1993.
Estigme acrea Drury Lepidoptera: Arctiidae	HN	c, m, o	Hill, 1987; Zhang, 1994
Helicoverpa zea Boddie Lepidoptera: Noctuidae	HN	c, m, o	EPPO, 1994; USDA, 1995b
Parasaissetia nigra (Nietner) Homoptera: Coccidae	HN, US	c, m, o	CPC, 1997; EPPO, 1994
Saissetia oleae (Bernard) Homoptera: Coccidae	HN, US	c, m, o	CPC, 1997
Fungi			
Rhizoctonia solani Kühn Agonomycetes	HN, US	c, m, o	CPC, 1997; Farr et al., 1989
Nematodes			
Meloidogyne incognita (Kofold and White) Chitwood Tylenchoidea: Heteroderidae	HN, US	c, m, o	FAO, 1993; Goodey et al., 1965; SON, 1984
Meloidogyne javanica (Treub) Chitwood Tylenchoidea: Heteroderidae	HN, US	c, m, o	EPPO, 1994; Goodey et al., 1965; SON, 1984

[1]Distribution: HN - Honduras, US - United States

[2]Codes: a Pest mainly associated with plant part other than commodity.
b Not likely to be a primary plant pest.
c Listed in non-reportable dictionary as non-actionable.
g Quarantine pest; pest has limited distribution in the U.S. and is under official control as follows: pest listed by name in USDA's pest dictionary; official quarantine action may be taken on this pest when intercepted on this commodity.

m Pest occurs within the country of origin for the commodity being assessed and has been reported to attack the commodity host species in other geographic regions, but has not been reported to attack the commodity host species in the area of origin being assessed.

o Organism does not meet the geographical and regulatory definition for a quarantine pest.

[3]*Ceratitis capitata* has been reportedly reared from a red asparagus berry, but there was no confirmation it was garden asparagus (*Asparagus officinalis*) (White and Elson-Harris, 1992).

5. List of Quarantine Pests

The list of quarantine pests for commercial shipments of **asparagus from Honduras** is provided below. Should any of these pests be intercepted on commercial (or any other) shipments of ***Asparagus* spp.** quarantine action may be taken.

Ceratitis capitata (Wiedemann)

6. Quarantine Pests Likely to Follow Pathway

From the previous lists there were no pests likely to follow the pathway. Plant pests in this Assessment, not chosen for further scrutiny, may be potentially detrimental to the agricultural production systems of the United States; however, there were a variety of reasons for not subjecting them to further analysis. For example, they are associated mainly with plant parts other than the commodity.

Asparagus from Honduras is currently permitted entry into the United States. Should additional pests, not identified in this Risk Assessment be intercepted, appropriate quarantine action will be taken.

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